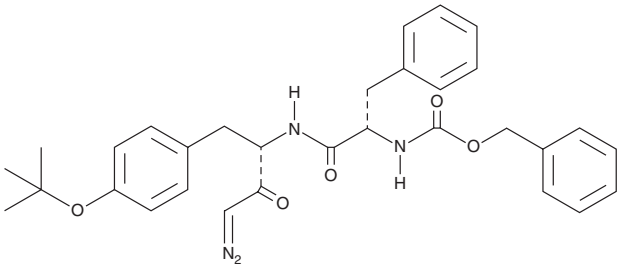
PRODUCT INFORMATION

Z-Phe-Tyr(*t*Bu)-diazomethylketone

Item No. 27877

CAS Registry No.: 114014-15-2
Formal Name: N-[(1S)-2-[[(1S)-3-diazo-1-[[4-(1,1-dimethylethoxy)phenyl]methyl]-2-oxopropyl]amino]-2-oxo-1-(phenylmethyl)ethyl]-carbamic acid, phenylmethyl ester
Synonyms: Cbz-Phe-Tyr(O-*t*-Bu)-CHN_2, Z-Phe-Tyr(*t*Bu)-CHN_2
MF: $C_{31}H_{34}N_4O_5$
FW: 542.6
Purity: ≥98%
UV/Vis.: λ_{max}: 254 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Z-Phe-Tyr(*t*Bu)-diazomethylketone is supplied as a crystalline solid. A stock solution may be made by dissolving the Z-Phe-Tyr(*t*Bu)-diazomethylketone in the solvent of choice, which should be purged with an inert gas. Z-Phe-Tyr(*t*Bu)-diazomethylketone is soluble in the organic solvent ethyl acetate at a concentration of approximately 10 mg/ml.

Description

Z-Phe-Tyr(*t*Bu)-diazomethylketone is an inhibitor of cathepsin L (K_{inact} = 200,000 $M^{-1}s^{-1}$).[1,2] It is selective for cathepsin L over cathepsin S and cathepsin B (K_{inact}s = 30 and 10.3 $M^{-1}s^{-1}$, respectively). Z-Phe-Tyr(*t*Bu)-diazomethylketone is active against bloodstream forms of *T. brucei brucei* clone 427-221a *in vitro* (EC_{50} = 126 µM).[3]

References

1. Shaw, E., Mohanty, S., Colic, A., *et al.* The affinity-labelling of cathepsin S with peptidyl diazomethyl ketones. Comparison with the inhibition of cathepsin L and calpain. *FEBS Lett.* **334(3)**, 340-342 (1993).
2. Kirschke, H., Wikstrom, P., and Shaw, E. Active center differences between cathepsins L and B: The S_1 binding region. *FEBS Lett.* **228(1)**, 128-130 (1988).
3. Nkemngu, N.J., Grande, R., Hansell, E., *et al.* Improved trypanocidal activities of cathepsin L inhibitors. *Int. J. Antimicrob. Agents* **22(2)**, 155-159 (2003).

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